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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/914,199	03/05/2002	Barend Visser	P-1707	9601
20978	7590	04/19/2004	EXAMINER	
LIBERT & ASSOCIATES 3 MILL POND LANE P O BOX 538 SIMSBURY, CT 06070-0538			MEDINA SANABRIA, MARIBEL	
			ART UNIT	PAPER NUMBER
			1754	

DATE MAILED: 04/19/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/914,199

Applicant(s)

VISSER, BAREND

Examiner

Maribel Medina

Art Unit

1754

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 13 October 2003.  
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 20-34 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☐ Claim(s) 20-34 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.  
10) ☒ The drawing(s) filed on 10/13/04 is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_.  
5) ☐ Notice of Informal Patent Application (PTO-152)  
6) ☐ Other: \_\_\_\_\_.

### **DETAILED ACTION**

#### **Amendment**

1. The Amendment filed on 10/16/2003 has been entered. Claims 1-19 have been canceled and new claims 20-34 have been entered.

#### **Response to Arguments**

2. Applicant's arguments with respect to claims 1-3, 6, 7 and 17 have been considered but are moot in view of the new ground(s) of rejection.

#### **Claim Rejections - 35 USC § 102**

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 20-26, 30 and 31 are rejected under 35 U.S.C. 102(b) as anticipated by RE 30,320 (Lowther).

Lowther discloses a method of producing ozone comprising the step of passing a reactant gas (i.e. oxygen-containing gas) through a corona discharge gap in which a narrow pulse high voltage waveform is applied to the gas (See col. 2, lines 39-53).

Lowther discloses a field of sparking potential in the range from 100 to 10,000 volts (See col. 10, lines 27-37); a peak voltage of from 2 to 200 kV (See claim 8); and a narrow pulse width  $T_w$  is selected to be from 1 to 50 % of the singly charged gas ion transit time (See claim 9).

As an example, Lowther discloses a pulse width ( $T_w$ ) of 0.066  $\mu$ s (66 ns) (See col. 6, line 26); sparking potential ( $V_s$ ) of 8250 V (See col. 5, line 14); and discharge gap ( $t_g$ ) of 0.115 cm

(1.15 mm). With known equations in the art (e.g. equations provided in the Declaration under rule 1.132 filed on 10/13/03 by applicant), one of ordinary skilled in the art would have easily determined the value of electric field and rate of change of the electric field to be 7174 V/mm and 3.41 V/mm/ns respectively. The rate of changed calculated from Lowther data clearly falls within the instantly claimed range. In regards to the limitation of claim 22, the rate instantly claimed would have been inherently provided by the method of Lowther once “the narrow pulse high voltage waveform” of Lowther is applied in the electrode region. Note In re Best, 195 USPQ at 433, footnote 4 (CCPA 1977).

Lowther discloses an apparatus comprising a housing defining a passage (14) that extends from the inlet to the outlet of the housing (1); first and second electrodes (2 and 3) and a voltage pulse generating means (24) connected to the electrodes and comprising a circuit (See Figures 1, 3 and 4)). No difference is seen between the instantly claimed invention and Lowther disclosure.

5. Claims 23-34 are rejected under 35 U.S.C. 102(b) as being anticipated by US Patent No. 4,869,881 (Collins).

Collins discloses an apparatus for producing ozone (see col. 5 line 37 - col. 6 line 56) comprising a housing (23); an electrically conductive tubular electrode (20) disposed in the housing (see figures 2-8); a passage for air; and a pulse generator. The conductive housing is connected to the secondary winding of a transformer (see figures 7-8). The housing is electrically insulated (see figures 9-12). The apparatus further comprises a timing unit including a MOSFET and capacitors (see col. 7, lines 6-61). No difference is seen between the instantly claimed invention and Collins disclosure.

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**Conclusion**

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

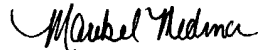
A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.


7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Maribel Medina whose telephone number is (571) 272-1355. The examiner can normally be reached on Monday through Friday from 7:30 AM to 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stanley Silverman can be reached on (571) 272-1358. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Maribel Medina  
Examiner  
Art Unit 1754

  
**STEVEN BOS**  
**PRIMARY EXAMINER**  
**GROUP 1100**